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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/870,517      | 06/01/2001  | Anette Buschka       | 000500-301          | 9594             |

7590 07/02/2004  
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EXAMINER

COLE, ELIZABETH M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1771

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/870,517 | <b>Applicant(s)</b><br>BUSCHKA ET AL. |  |
|                              | <b>Examiner</b><br>Elizabeth M. Cole | <b>Art Unit</b><br>1771               |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

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1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the carding element must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. An amendment to the specification was received with the response to the office action, but no new drawings have been received. The application as filed only included one drawing and no element 9 is seen on the figure.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7-10, 29, 31 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ruffo et al, U.S. Patent No. 4,018,646.

Ruffo discloses a material comprising a mixture of cellulosic fibers and reinforcing fibers. The

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reinforcing fibers may have a length within the claimed range. The material may be used as absorbent material. The reinforcing fibers may comprise natural and synthetic fibers including cotton, polyester, polyolefin, rayon, nylon, etc. See col. 10, lines 12-64; col. 21, lines 40-61. The material may be integrated by needling the fibers to interlock them without the use of any bonding agents. See col. 13, lines 34-41. The material may comprise different proportions of pulp to reinforcing textile fibers, such as 50-50 or 60-40. See col. 12, lines 31-40. With regard to the limitation that the material is obtained by directly dry-laying the cellulose fibers on the newly formed gauze of textile fibers and the limitations regarding the apparatus used to make the material, the claims are drawn to a product. The material of Ruffo et al appears to be the same as the claimed invention although it may not be produced in exactly the same way. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983)

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumura et al, U.S. Patent No. 3,984,898 in view of Ruffo et al, U.S. Patent No. 4,018,646 and Fehrer, U.S. Patent No. 4,972,551. Matsumura et al discloses a material comprising a mixture of cellulosic short fibers and reinforcing fibers. The relative proportions of the fibers are within the claimed range. The lengths of the reinforcing fibers are within the claimed range. Matsumura et al also discloses a method of making a material comprising a mixture of cellulosic short fibers and reinforcing comprising the steps of forming the reinforcing fibers into a gauze on a wire and then forming the cellulosic fibers into a web and integrating them with the reinforcing fibers to form a fabric. The reinforcing fibers may comprise rayon fibers. With regard to the limitation that the air-doffing apparatus has at least one carding element, Matsumura teaches employing carded fibers which are supplied to the air doffing machine. It would have been obvious to have formed the carding element and the air-doffing apparatus as a single apparatus because it has been held that the use of a one piece construction for a variety of elements would merely be a "matter of obvious engineering choice". In re Larson , 340 F.2d 965, 144 USPQ 347, 349 (CCPA 1965. Additionally, Fehrer teaches that a carding apparatus may be supplied with air streams in order to direct the carded fibers to a collecting surface in order to form the nonwoven fabric. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed the apparatus disclosed by Fehrer. One of ordinary skill in the art would have been motivated to employ the apparatus of Fehrer to form the Matsumura et al fabric because Matsumura teaches that carded fibers should be supplied to the air doffing apparatus and the use of the Fehrer apparatus would simplify the process by providing an apparatus which both carded the fibers and air-doffed the fibers onto a collecting

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surface. Matsumura et al differs from the claimed invention because Matsumura et al does not teach the claimed dtex of the fibers and does not teach employing the material as an absorbent material after defibering the material and without defibering the material. With regard to defibering, it is conventional in the art of absorbent articles to employ absorbent structures which have been defibered and which have not been defibered and therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed the material with or without defibering it. With regard to the claimed dtex, since the dtex of fibers is related to the strength, softness, etc. of the fibers and the resulting products formed from the fibers, it would have been obvious to one of ordinary skill in the art to have selected fibers having a dtex which would produce a product having sufficient strength, softness, etc. With regard to the relative proportions of reinforcing fibers and cellulosic fibers, since the reinforcing fibers serve to strengthen the material, it would have been obvious to one of ordinary skill in the art to have selected the relative proportions of the reinforcing fibers in order to produce a material having the desired strength. Matsumura et al also differ from the claimed invention because Matsumura et al does not teach that bonding occurs in the absence of a bonding agent, but instead employs a binder. Ruffo et al teaches that employing a bonding agent and mechanically interlocking the fibers are both known and equivalent methods of bonding fibrous webs comprising cellulosic fibers and reinforcing fibers. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have bonded the fiber web of Matsumura et al by mechanically interlocking the web rather than by using a binder, since Ruffo et al teaches that the two bonding methods are known to be equivalents in the art.

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6. Claims 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumura in view of Ruffo and Fehrer as applied to claims above, and further in view of WO 97/45083 to Rosseland. Matsumura does not teach employing HTCMP or flash dried pulp. Rosseland teaches at page 8, that HTCMP and flash dried pulp can be employed to form airlaid nonwoven. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed HTCMP and/or flash dried pulp. One of ordinary skill in the art would have been motivated to employ such fibers because Rosseland teaches that it is useful in forming nonwoven air laid fabrics.

7. Claims 4-6, 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruffo et al, U.S. Patent No. 4,018,646. Ruffo discloses a material comprising a mixture of cellulosic fibers and reinforcing fibers. The reinforcing fibers may have a length within the claimed range. The material may be used as absorbent material. The reinforcing fibers may comprise natural and synthetic fibers including cotton, polyester, polyolefin, rayon, nylon, etc. Ruffo et al differs from the claimed invention because Ruffo et al does not disclose the fiber size in terms of dtex and does not teach the claimed proportions of reinforcing fibers. With regard to the dtex of the fibers, since Ruffo does teach that the fibers should have a denier of 0.75 to 6 denier, it appears that this would overlap the claimed range. Additionally, since the dtex of fibers is related to the strength, softness, etc. of the fibers and the resulting products formed from the fibers, it would have been obvious to one of ordinary skill in the art to have selected fibers having a dtex which would produce a product having sufficient strength, softness, etc. With

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regard to the relative proportions of reinforcing fibers and cellulosic fibers, since the reinforcing fibers serve to strengthen the material, it would have been obvious to one of ordinary skill in the art to have selected the relative proportions of the reinforcing fibers in order to produce a material having the desired strength.

The material may be integrated by needling the fibers to interlock them without the use of any bonding agents. See col. 13, lines 34-41. With regard to the limitation that the material is obtained by directly dry-laying the cellulose fibers on the newly formed gauze of textile fibers, the claims are drawn to a product. The material of Ruffo et al appears to be the same as the claimed invention although it may not be produced in exactly the same way. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983).

8. Applicants arguments filed 2/17/04 have been fully considered but they are not persuasive. Applicant's comments with regard to the drawings are addressed in the first paragraph of the action.

9. With regard to Ruffo, Applicant argues that the product of Ruffo is not the same as or similar to the prior art product because the claimed product comprises a layered product while Ruffo teaches a homogeneous mixture of the reinforcing and cellulosic fibers. However, at col. 2, lines 11-34, Ruffo teaches that depending upon the how the position of the baffles is varied a



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wide variety of webs can be produced, including a web which is two layered, comprising a first layer of long fibers and a second layer of short fibers. Therefore, the product of Ruffo appears to be the same as or similar to the claimed product and therefore, Applicant bears of the burden of establishing an unobvious difference between the claimed product and the Ruffo product. Also, in the embodiment at col. 22, it is noted that the layers are in the same order as in the instant claims, i.e., the long fibers are on the bottom and the short fibers are on the top. Applicant states that there would be intermixing of the fibers at the interface of the embodiment set forth at col. 22 and that this would differentiate the claimed product from the Ruffo product. However, the instant claims do not preclude any intermixing being present at the interface. Also, Ruffo states that a two layer web is formed, not a three layer web which comprises an intermixing layer. The only intermixing in the embodiment set forth at col. 22 would be at the interface between the layers which would presumably also be present in the instant invention.

10. With regard to the combination of Matsumura in view of Ruffo and Fehrer, Applicant argues that contrary to the statement in the office action, Ruffo does not teach that mechanical entangling is a known equivalent to the use of bonding agents for providing integrity to nonwoven fabrics comprising pulp fibers and synthetic reinforcing fibers. However, Ruffo clearly states that mechanical entangling is a known method of providing integrity to such fabrics and that other known methods include the use of chemical bonding agents. Ruffo does not say that the use of bonding agents and the use of mechanical entangling means are the same, but Ruffo clearly teaches that these are all known means of providing integrity to a nonwoven. Therefore, Ruffo teaches the equivalency of the methods. One of ordinary skill in the art therefore, would have been motivated to employ the different means taught by Ruffo to bond the

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nonwoven of Matsumura, i.e., bonding agents, mechanical bonding, etc. An express teaching of substituting one equivalent means for another is not required. Therefore, this rejection has been maintained. Applicant argues that since Matsumura already teaches adhesive bonding, presumably one of ordinary skill in the art had already decided that adhesive bonding would be best for the Matsumura fabric. However, one of ordinary skill in the art would know that mechanical bonding produces a more compressed product, but is free of additional chemical agents which tend to stiffen such fabrics, may have a detrimental affect on hand, etc. of such fabrics and may potentially cause irritation or other problems to end users of the fabric. One of ordinary skill in the art would have known that mechanical bonding tends to compress a fabric and tends to form a less strongly bonded fabric than impregnating or coating a fabric with a binding agent. Therefore, one of ordinary skill in this art would have been able to have selected from the known methods of bonding which are clearly set forth by Ruffo as being useful for this particular type of fabric, depending on what types of properties were desired in the final fabric and what the end use of the fabric was going to be.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (703) 872-9306.



Elizabeth M. Cole  
Primary Examiner  
Art Unit 1771

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